The Research Process

Fall 2015
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*The Research Process Handbook* Fall 2015

Written and updated by: Prof. Neera Mohess
Understand Your Assignment

If you are unclear about any of the following, please check with your professor. They will be glad you did!

- When is it due?
- How long should it be?
- Is my topic sufficiently broad enough to find information, and sufficiently narrow so you are not overwhelmed with information?
- How many sources are needed?
- What kinds of sources are needed? (scholarly journal articles, books, films…)
- Where should I look for these sources? (specialized databases, specific library research guide, Google…)
- Who should I contact with questions about research? (library faculty, classroom professor…)
- What kind of a project is it? (informative, persuasive, analytical…)
- Citation Style (Modern Language Association (MLA), American Psychological Association (APA), Chicago…)
- Do I understand how to organize and outline my paper?
- Who should I contact for help with writing my paper? (The Writing Center, professor…)
- Do I understand the format of my project? (1 inch margins, Times New Roman 12 point font…)

Neera Mohess
QCC Library 2015
Primary & Secondary Sources

What are Primary Sources?
Primary sources are original texts and objects which were written or created at the time under study. Primary sources have not been interpreted or edited. Examples include:

- **ORIGINAL DOCUMENTS** - video footage, interviews, speeches, laws, autobiographies, novels, diaries, poems, letters, journal articles presenting original research, official records, maps, polling results, memoirs, census data...
- **CREATIVE WORKS** - music, paintings, sculpture, poetry, novels, plays, photographs...
- **ARTIFACTS & OBJECTS** - clothing, pottery, tools, weapons, coins, furniture...

What are Secondary Sources?
Secondary sources are created by someone either not present when the event took place, or removed by time from the event. They may use primary sources to interpret or analyze an event. Examples include:

- **TEXTS**: encyclopedias, biographies, textbooks, non-fiction books...
- **CREATIVE WORKS**: art collages, documentaries, edited photographs...

Primary and Secondary Sources Compared

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>Primary Source</th>
<th>Secondary Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Events</td>
<td>Video footage of shore damage done by Hurricane Sandy</td>
<td>A documentary about Hurricane Sandy that includes video footage, interviews, and photographs</td>
</tr>
<tr>
<td>Literature</td>
<td>The novel <em>To Kill a Mockingbird</em> by Harper Lee</td>
<td>A literary criticism article that analyzes human morality through the characters in <em>To Kill a Mockingbird</em></td>
</tr>
<tr>
<td>Physics</td>
<td>Data from a space telescope</td>
<td>A physics 101 textbook</td>
</tr>
<tr>
<td>Art</td>
<td>The painting <em>Starry Night</em> by Van Gogh</td>
<td>A journal article that references <em>Starry Night</em> to discuss the history of post-impressionism</td>
</tr>
</tbody>
</table>
# Scholarly & Non-Scholarly Sources

<table>
<thead>
<tr>
<th></th>
<th>Scholarly Articles</th>
<th>Non-Scholarly Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Check off the boxes to see whether your article is scholarly or not.</strong></td>
<td><img src="image" alt="Scholarly Article" /></td>
<td><img src="image" alt="Non-Scholarly Article" /></td>
</tr>
<tr>
<td><strong>WHO WRITES THESE ARTICLES?</strong></td>
<td>□ Scholars and researchers in the field&lt;br▷ Names &amp; credentials are clearly stated</td>
<td>□ Journalists/staff &amp; guest writers&lt;br▷ Names are not always noted</td>
</tr>
<tr>
<td><strong>WHAT IS THE PURPOSE OF THESE ARTICLES?</strong></td>
<td>□ To share the results of primary research &amp; experiments with experts in their field of study</td>
<td>□ To inform or entertain</td>
</tr>
<tr>
<td><strong>WHO READS THESE ARTICLES?</strong></td>
<td>□ Subject matter experts in the field&lt;br▷ Those interested in the topic at a research level – researchers, college students, professors, etc.</td>
<td>□ Anyone</td>
</tr>
<tr>
<td><strong>HOW LONG ARE THEY?</strong></td>
<td>□ Articles may be lengthy, approximately 6 to 30+ pages</td>
<td>□ Articles may be short, approximately 1 to 5 pages</td>
</tr>
<tr>
<td><strong>WHO DECIDES WHICH ARTICLES ARE PUBLISHED?</strong></td>
<td>□ Experts in the field review each article for accuracy, relevance, etc. (the peer review process)</td>
<td>□ Editors and other writers of the publication decide based on consumer appeal - no peer review</td>
</tr>
<tr>
<td><strong>HOW DO THESE ARTICLES LOOK?</strong></td>
<td>□ The majority have a simple black-and-white format, charts, graphs, statistics, list of references, minimal or no advertising</td>
<td>□ Lots of pictures, photographs, advertisements – designed to appeal to the general public</td>
</tr>
<tr>
<td><strong>DO THEY CITE THEIR SOURCES?</strong></td>
<td>□ Always - using the official citation style appropriate to the discipline (APA, MLA, Chicago etc.)</td>
<td>□ Rarely - though may link to a source/mention sources informally in the text of the article</td>
</tr>
</tbody>
</table>
The Information Cycle

What is the Information Cycle?

- The Information Cycle is the progression of media coverage of a newsworthy event over time
- Understanding how the Information Cycle progresses will let you know what kind of information is available at a particular point in time
- An “event” that begins an Information Cycle could be a: tsunami, election, just published research article, novel, new building, terrorist act, new technology, etc.
- Not all newsworthy events will complete an Information Cycle

Minutes after an event: Internet/Social Media

Information:
- Tends to be fragmented and basic, describing what happened and who was involved
- Is continuously updated as new details become available
- May lack details, facts, and accuracy
- Is written by a mix of laypersons, bloggers, journalists, etc.

Examples: Facebook, Twitter, YouTube, Instagram

Day/Days after an event: News Reports

Information:
- Contains more details about an event than earlier reports including quotes, statistics, interviews
- Is written by journalists, contributors, etc., and while often factual, may reflect editorial bias
- Does not include a reference list of sources, though may provide links to sources
- Is intended for a general audience

The Information Cycle (cont’d)

**Week/Weeks of an event: Magazines**

**Information:**
- Is more in-depth, and discusses the impact of an event on society, and public policy
- Is written by journalists, contributors, etc., and while often factual, may reflect editorial bias
- Does not include a reference list of sources, though may provide links to sources
- Is intended for a general audience

Examples: *Time, New York Magazine*

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**Months after an event: Scholarly Journals**

**Information:**
- Is written by people considered to be experts in the field: researchers, scientists, etc.
- Is often original research about an event, sometimes including empirical data
- Includes detailed analysis, and a full list of sources (bibliography)
- Is written for other researchers in the field and those interested in the topic at a research level

Examples: *Journal of Islamic Studies, Journal of Financial Economics*

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**Year/Years after an event: Books**

**Information:**
- Often expands analysis of an event using information found in journals, newspapers, and magazines
- Will often place an event in a historical context
- Is written by a mix of professional and non-professional authors
- Will sometimes include in-text citation and a full list of sources


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**Year/Years after an event: Reference Sources**

**Information:**
- Is considered established knowledge
- May lack the details and specifics of earlier sources of information (e.g. journal articles)
- Provides summaries and overviews of the event, often with a list of sources
- Written for a general audience

Examples: *Encyclopedias, Textbooks, Dictionaries, Handbooks*
Evaluate Information Checklist

Whether you are looking at books, the Internet, or scholarly journals, complete this checklist to ensure your information needs are met:

Who Wrote It?
The author of the information (whether a person or organization) should have knowledge about the topic and/or expertise in analyzing and presenting information.

Their names should be evident and you should be able to contact them.

Why Did They Write It?
There could be many reasons why a piece of information was created: to persuade you to do something, to inform you about something, to sell you something, etc.

Ask yourself: What does the author want me to do with this information?

Who Was it Written For?
The intended audience impacts the quantity, quality, and range of what is presented. The more general the audience, the more general the information.

The reverse is also true: the more specific the audience (e.g. researchers) the more the information will be focused and detailed.
Evaluate Information Checklist (cont’d)

How Old/New Is It?

Some topics are more time-sensitive than others. For example, information about the latest computer technology is more time sensitive than information about the first moon landing in 1969.

Is It Accurate?

Some tip-offs to accuracy include the stated expertise of the author, whether the article cites the sources used, where the article was posted, and the care taken in presenting the information (e.g. no typos).

Currency Checklist

__ Currency is important for this topic
__ Currency does not matter
__ The information is current
__ The information is not current

Accuracy Checklist

__ Expertise of author is stated
__ Sources are cited
__ Text is free of grammatical errors
Narrow Your Topic

Have you ever picked a topic, did some research, and realized …

☐ The information you found had a vague, general quality
☐ You were overwhelmed by the amount of information you found
☐ You got frustrated – you didn’t know which direction to go!

… It was probably because the topic was TOO BROAD.

Use the following questions to narrow your topic and guide your research. For example, here are some ways you could narrow the broad topic EDUCATION:

WHO are the people/groups you want to focus on?
  ➔ college students, minorities, Kindergarten - 12th grade (K-12), teachers…

WHAT aspect of the topic interests you?
  ➔ study habits, bullying, education reform, desegregation…

WHICH point-of-view/approach will you take?
  ➔ legal, ethical, psychological, scientific, historical, political…

WHEN did important events occur?
  ➔ today, 1950’s, next ten years, President Reagan years…

WHERE do you want to focus, geographically?
  ➔ Alabama, New York, China…

It is possible to create several distinct research tracks from a single topic:

Track #1: college-students ➔ study habits ➔ psychological ➔ today ➔ China

Track #2: K-12 ➔ education reform ➔ historical ➔ President Reagan years ➔ New York

Track #3: minorities ➔ desegregation ➔ legal ➔ 1950’s ➔ Alabama
Narrow Your Topic Worksheet

**WHO** are the people/groups you want to focus on?

______________________________

______________________________

**WHAT** aspect of the topic interests you?

______________________________

______________________________

**WHICH** point-of-view/approach will you take?

______________________________

______________________________

**WHEN** did important events occur?

______________________________

______________________________

**WHERE** do you want to focus, geographically?

______________________________

______________________________
Refine Your Topic

A common mistake beginning researchers make is to pick a topic - no matter how broad - and then to immediately try and find all the information they can about it.

A better method is to first refine a topic into a question worth answering or a problem worth solving (this may involve preliminary research). Then you will be in a position to find the specific information you need, rather than be overwhelmed with irrelevant information. Use the template below to help refine your topic.

1. **Topic:** what you are writing about - I am working on the topic of ________________

2. **Indirect Question:** what you want to know about it - because I want to know who / what / when / where / why / if ________________

3. **Significance:** why you want your reader to know and care about it - in order to help my reader understand better ________________

**HINT:** If you are having trouble moving from one stage to the next, keep asking yourself *Why?* until you find your answer.

You may not be able to answer the third question until you have done some significant research, and/or have completed a first draft.

**EXAMPLES:**

1. **Topic:** I am studying  climate change  *Why?*

2. **Indirect Question:** because I want to know how  global warming could impact NYC  *Why?*

3. **Significance:** in order to  know how to prepare for another Hurricane Sandy.

1. **Topic:** I am researching  social media  *Why?*

2. **Indirect Question:** because I want to know what  Twitter does with users’ data   *Why?*

3. **Significance:** in order to  find the best ways to safeguard privacy when online.


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QCC Library 2015
Refine Your Topic Worksheet

If you are having trouble moving from one stage to the next, keep asking yourself *Why?* until you find your answer.

You may not be able to answer the third question until you have done some significant research, and/or have completed a first draft.

I am working on the topic of

because I want to know who/what/when/where/why/if

in order to help my reader understand better
Develop Keywords and Related Terms

**Keywords**

If you read an article about **racial profiling** and the **police** and would like to write a paper on this topic, keep in mind:

- The keywords you use may not be the words that others use to describe the same concept
- It is a good idea to have a few similar words (*synonyms*) for each keyword
- Write down any synonyms you find as you research
- Try different combinations of keywords to get different results

**Related Terms**

- Related terms are *associated* with your topic, without being synonyms for them
- For example, **poverty** and **food stamps** are related terms, but they mean different things
- Write down any related terms you find as you research
- Finding related terms for your topic will help direct your research
Keywords and Related Terms Worksheet

Keywords for your topic – similar words (synonyms)

Related Terms for your Keywords
Write a Thesis Statement

The best thesis statement is written after you have done some research on your topic. It usually consists of three parts:

1. Your topic
2. Your position on the topic
3. Evidence-based reasons for your position

Thesis Template: my topic is/contributes to/ my position on topic because of reason 1, reason 2 and reason 3

Example 1:

Facebook leads to a decline in student grades because it takes up time a student could spend studying. It leads to attention deficit disorder and causes depression.

Example 2:

In terms of rhythm, the tendency to sample the melodies of the day, and musical structure, there are undeniable similarities between hip-hop and classical music.

Example 3:

It should be illegal to own pet giraffes in the city because they eat all the shrubs, it is hard to clean up after them, and they damage property.

A common obstacle to creating a good thesis statement occurs when you choose a topic that is either too broad or too narrow. If a topic is too broad your thesis will be vague; if it is too narrow it will be difficult to find evidence to back up your claim.
Thesis Statement Worksheet

1. Your topic: ________________________________________________

2. Your position on the topic:
   __________________________________________________________

3. Evidence-based reasons for your position:
   a. ______________________________________________________
   b. ______________________________________________________
   c. ______________________________________________________

Working Thesis Statement:
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

Expect to modify this Working Thesis Statement as you do more research, think more about your topic, and consult your professor.

Final Thesis Statement:
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

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Simple Paper Outline

I. Introduction

1. Introduce your topic with an attention grabbing sentence, quote, or statistic
2. Provide some background information about your topic *(cite your sources!)*
3. State your position on the topic, and briefly outline the evidence-based reasons which will prove your position (your thesis statement)

II. Body

1. Reason 1
   a. Introduction and explanation of your reason
   b. Give evidence *(cite your sources!)*
   c. Explain how the reason and evidence relate to your thesis

2. Reason 2
   a. Introduction and explanation of your reason
   b. Give evidence *(cite your sources!)*
   c. Explain how the reason and evidence relate to your thesis

3. Reason 3
   a. Introduction and explanation of your reason
   b. Give evidence *(cite your sources!)*
   c. Explain how the reason and evidence relate to your thesis

III. Conclusion

1. Summarize the topic and your position
2. Consider any evidence for alternate views to your position. This will provide balance
3. Explore the implications of the points you raised and consider any practical applications
Simple Paper Outline Worksheet

I. Introduction

1. Attention Grabber _______________________________________________________
2. Background __________________________________________________________
3. Thesis Statement _______________________________________________________

II. Body

1. Reason 1
   a. Evidence_______________________________________________________________
      _________________________________________________________________
   b. Alternate Views _______________________________________________________
   c. Relation to Thesis _____________________________________________________

2. Reason 2
   a. Evidence_______________________________________________________________
      _________________________________________________________________
   b. Alternate Views _______________________________________________________
   c. Relation to Thesis _____________________________________________________

3. Reason 3
   a. Evidence_______________________________________________________________
      _________________________________________________________________
   b. Alternate Views _______________________________________________________
   c. Relation to Thesis _____________________________________________________

III. Conclusion

1. Summarize topic/position__________________________________________________
2. Explore the implications of your findings/ideas______________________________
3. Consider any practical implications of your findings/ideas_______________________
“They Say, I Say” Templates

These templates and transitions, taken from Graff and Birkenstein, aid you in presenting your thesis, supporting evidence and opposing evidence in a clear, straightforward manner. Remember to cite all your sources, both in-text and at the end of your project.

Introducing Standard Views
- Many psychologists think that ________.
- The status quo has it that ________.
- Many people assume that ________.

Introducing Quotations
- X claims “______.”
- According to X “______.”
- X states “______.”

Explaining Quotations
- In essence, X is saying ________.
- What X means is that ________.
- In saying _______, X urges us to ________.

Signaling Who is Saying What
- According to both X and Y ________.
- X argues that students should ________.
- My own view, however, is that ________.

Disagreeing, with Reasons
- I disagree with X because I think she overlooks ________.
- X’s belief about ________ rests on the faulty assumption that ________.
- Furthermore, research shows ________.
- Here, X contradicts himself. On the one hand he states ________.
- On the other hand he says ________.

Agreeing with a Difference
- X’s research on ________ is important because it sheds insight on why ________.
- I agree that ________, a point that needs emphasizing since so many people believe ________.
- If group X is right that ________, then we need to reassess the popular assumption that ________.

Agreeing and Disagreeing Simultaneously
- Although I agree with X up to a point, I cannot accept his overall conclusion that ________.
- X is right that ________, but she seems on more dubious ground when she claims that ________.
- My feelings on the issue are mixed. I do support X’s position that ________, but I find Y’s argument about ________ and Z’s research on ________ to be equally persuasive.

Embedding Voice Markers
- X overlooks an important point about ________ when he says ________.
- In fact ________.
- I wholeheartedly endorse what X calls ________.
- These conclusions, which X discusses in ________, add weight to the argument that ________.
Making Concessions While Still Standing Your Ground
• Although I grant that _____, I still maintain that _______.
• While it is true that ______, it does not necessarily follow that _______.
• One the one hand I agree with X that ______. But on the other hand, I still insist that_______.

Indicating Who Cares
• ______used to think ________. But recently, ________ suggests that ________.
• At first glance, college students appear to ________. But on closer inspection ________.
• Researchers have long assumed that ________. For instance, one eminent psychologist X long argued that __________. However, new research on the topic shows that ________.

Establishing Why Your Claims Matter
• X matters/is important because __________.
• These conclusions/This discovery will have significant application in ________ as well as ________.
• Although X may seem of concern to only a small group of ________, it should in fact concern anyone who cares about ________.

Comparing Two or More Studies Findings
• By demonstrating ________, X’s work extends the findings of Y.
• The results of X contradict Y’s conclusion that ________.
• X’s findings call into question the widely accepted theory that __________.

Explaining an Experimental Result
• One explanation for X’s finding of ________ is that ________. An alternative explanation is ________.
• The difference between ________ and ________ is probably due to ________.

Introducing Gaps in the Existing Research
• Studies of X have indicated ________. It is not clear, however, that this conclusion applies to ________. 
• ________ often take for granted that ________. Few have investigated this assumption however.
• X’s work tells us a great deal about ________. Can this work be generalized to ________?

Commonly Used Transitions

<table>
<thead>
<tr>
<th>CAUSE AND EFFECT</th>
<th>CONCLUSION</th>
<th>COMPARISON</th>
<th>CONTRAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>accordingly</td>
<td>to sum up</td>
<td>along the same lines</td>
<td>despite</td>
</tr>
<tr>
<td>as a result</td>
<td>in conclusion, then</td>
<td>in the same way</td>
<td>although</td>
</tr>
<tr>
<td>since</td>
<td>consequently</td>
<td>likewise</td>
<td>nevertheless</td>
</tr>
<tr>
<td>therefore</td>
<td>hence</td>
<td>similarly</td>
<td>on the other hand</td>
</tr>
<tr>
<td>thus</td>
<td>it follows, then</td>
<td></td>
<td>on the contrary</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDITION</th>
<th>CONCESSION</th>
<th>EXAMPLE</th>
<th>ELABORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>also</td>
<td>granted</td>
<td>for instance</td>
<td>in other words</td>
</tr>
<tr>
<td>moreover</td>
<td>admitted</td>
<td>consider</td>
<td>to put it in another way</td>
</tr>
<tr>
<td>furthermore</td>
<td></td>
<td>for example</td>
<td>in short</td>
</tr>
<tr>
<td>so too</td>
<td>I concede that</td>
<td>to take a case in point</td>
<td>by extension</td>
</tr>
<tr>
<td>besides</td>
<td>although it is true that</td>
<td>as an illustration</td>
<td>to put it bluntly</td>
</tr>
<tr>
<td></td>
<td>of course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Completed Paper Checklist

Please consult this checklist to ensure you have thoroughly researched and revised your assignment.

__ I have addressed all parts of the assignment.

__ I consulted with a library faculty for help with:
   ___ topic selection and refinement
   ___ finding credible, authoritative sources of information
   ___ citing my sources

__ I use a variety of credible, authoritative evidence (for example, quotes, examples, facts, illustrations) to reinforce my argument(s).

__ I consulted with a Writing Tutor at The Writing Center to improve my paper’s organization, argument, sentence structure and style.

__ My paragraphs are organized logically and help advance my argument.

__ My conclusion summarizes my argument and explores its implications; it does not simply restate the topic paragraph.

__ I have proofread my paper carefully, not relying on my computer to do it for me.

__ I consulted my professor if I had any questions or concerns about my paper.

__ My name is at the top of the paper.

__ The paper is stapled, double-spaced with 1” margins, and uses Times New Roman or a similarly sized/styled font.

__ All my sources are cited both in-text, throughout my paper and also in my bibliography, with the required citation style (APA, MLA, Chicago…).

__ I have read the plagiarism statement in the syllabus, understand it, and agree to abide by the definitions and penalties described there.

Adapted, with changes, from How Learning Works: Seven Researched-Based Principles for Smart Teaching. Jossey-Bass: San Francisco.